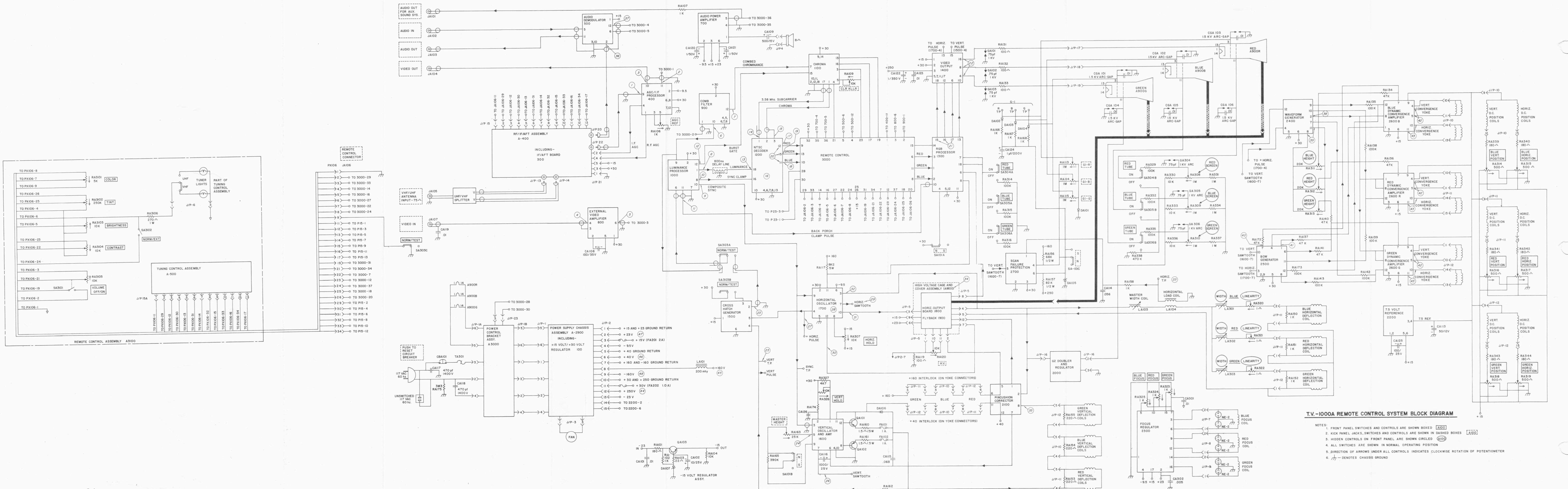


REMOTE CONTROL

REMOTE CONTROL



T.V.-1000A REMOTE CONTROL SYSTEM BLOCK DIAGRAM

- NOTES:
1. FRONT PANEL SWITCHES AND CONTROLS ARE SHOWN BOXED [A100]
 2. KICK PANEL JACKS, SWITCHES AND CONTROLS ARE SHOWN IN DASHED BOXES [A100]
 3. HIDDEN CONTROLS ON FRONT PANEL ARE SHOWN CIRCLED [A100]
 4. ALL SWITCHES ARE SHOWN IN NORMAL OPERATING POSITION
 5. DIRECTION OF ARROWS UNDER ALL CONTROLS INDICATES CLOCKWISE ROTATION OF POTENTIOMETER
 6. --- DENOTES CHASSIS GROUND

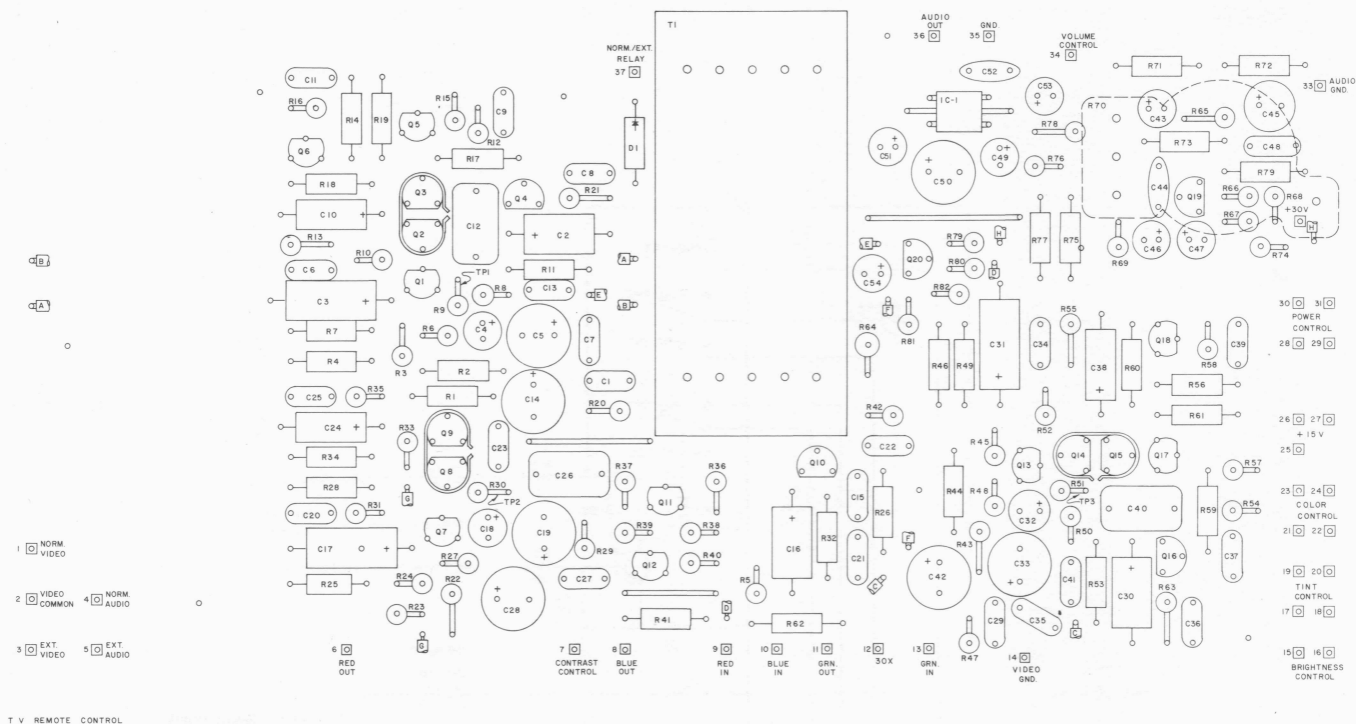
DESCRIPTION

In the Model 1000A Remote-Control VideoBeam television the program-tuning and picture-adjustment controls needed for day-to-day viewing are housed in a separate compact console which may be located wherever it is most convenient to the user. The control console is connected to the VideoBeam receiver/projector via a 30-foot multiconductor cable which carries only safe low-voltage signals. The remote control console may be positioned at any angle and is supplied with rubber feet on two surfaces. It is preferable to locate the remote control console within the prime viewing area (see page 1-3). Outside of that area the picture appears dim and incorrectly colored, so that if the Color and Tint settings are optimized for an off-axis location, viewers in the prime viewing area may find the color balance unrealistic.

One end of the cable is permanently attached to the remote control console; the other end terminates in a plug which mates with a socket located on the VideoBeam projector's Connection Panel. Before plugging the cable into (or unplugging it from) the projector, be sure that the Volume control on the remote console is switched OFF. The plug is keyed so that it goes into the socket only one way. Push the plug in fully; then press the two swinging "bails" into the clasps on the plug, locking it in place. The Model 1000A Remote Control system is intended for semi-permanent connection. The plug and socket were not designed to be unplugged and reconnected frequently (e.g., daily).

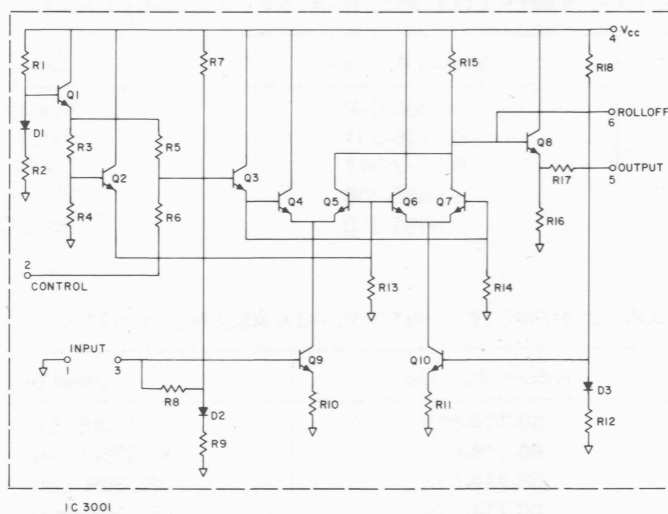
The cable should be routed to the projector with care. Because of the many conductors within it, the cable is relatively thick and stiff, so that sensible precautions should be taken to avoid frequent or excessively sharp bending and flexing of the cable. It should be routed where people are not likely to walk on it or trip over it, and it should not be subjected to the caustic solutions sometimes used for cleaning floors. In public places the best procedure may be to run the cable beneath the floor. Another good approach is to route the cable along a wall a few inches above the floor, attaching it to baseboard molding with the aid of plastic cable clamps. Insulated staples can be substituted for the cable clamps if care is taken not to pinch or pierce the cable, but bare metal staples are not recommended as they may cut through the insulation and short-circuit the wires within. Do not attempt to make a sharp right-angle bend in the cable to fit a tight corner. Instead leave a little slack and use clamps to avoid stressing the cable.

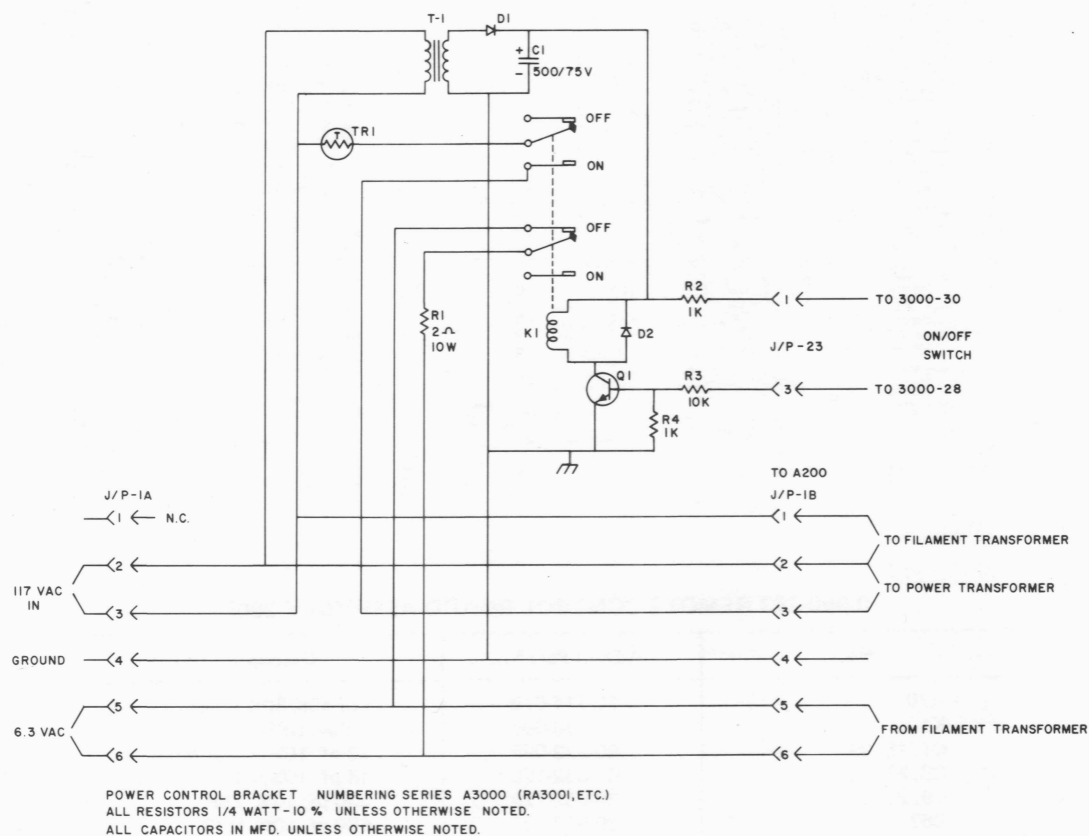
The program-tuning and picture-adjustment controls on the remote-control console are essentially identical in layout and operation to those on the standard Model 1000A control panel. One minor exception may be noted: if the Contrast control on the remote-control console is turned all the way down the picture will blank out entirely. And as the Contrast control is turned up again the picture brightness will flicker briefly. But over the upper portion of its range, where it normally will be set, the Contrast control operates in accordance with the description in the Model 1000A service manual.



10-990-353 REMOTE CONTROL BOARD ASSEMBLY 3000

No.	Advent Part No.	Description
R70	50-714-079	Pot 10K 30% Linear
K1	60-136-005	Relay, DPDT
C1, 15, 29	60-632-095	33 pf, 10%, Silver Mica
C8, 22, 36	60-632-125	18 pf, 10%, NPO
C9, 23, 37	60-632-129	330 pf, 10%, Z5P
C52	60-632-139	680 pf, 10%, NPO
D1	60-663-101	IN4002
Q2, 3, 4, 8, 9, 10, 14, 15, 16, 19, 20	60-673-006	TIS97
Q1, 5, 6, 7, 11, 12, 13, 17, 18	60-674-003	2N5087
IC 1	60-677-021	Motorola MFC 6040



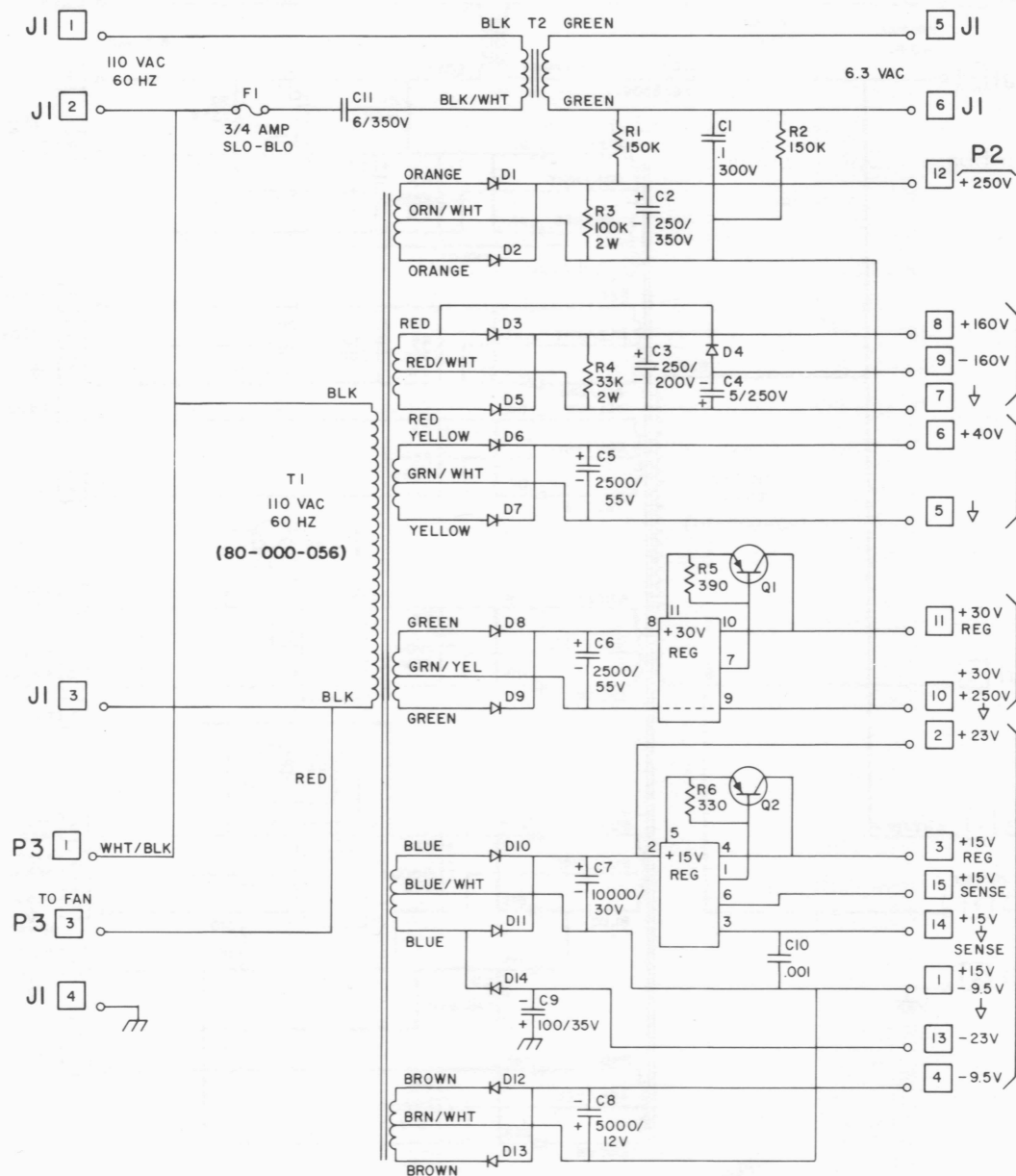


10-990-355 POWER CONTROL BRACKET ASSEMBLY A3000

No.	Advent Part No.	Description
T1	80-000-018	Transformer
K1	60-136-001	Relay, DPDT
Q1	60-673-041	TIP29A
TR1	60-656-006	Thermistor
D1, 2	60-663-010	IN4002

10-990-361 REMOTE CONTROL BOX ASSEMBLY A3100

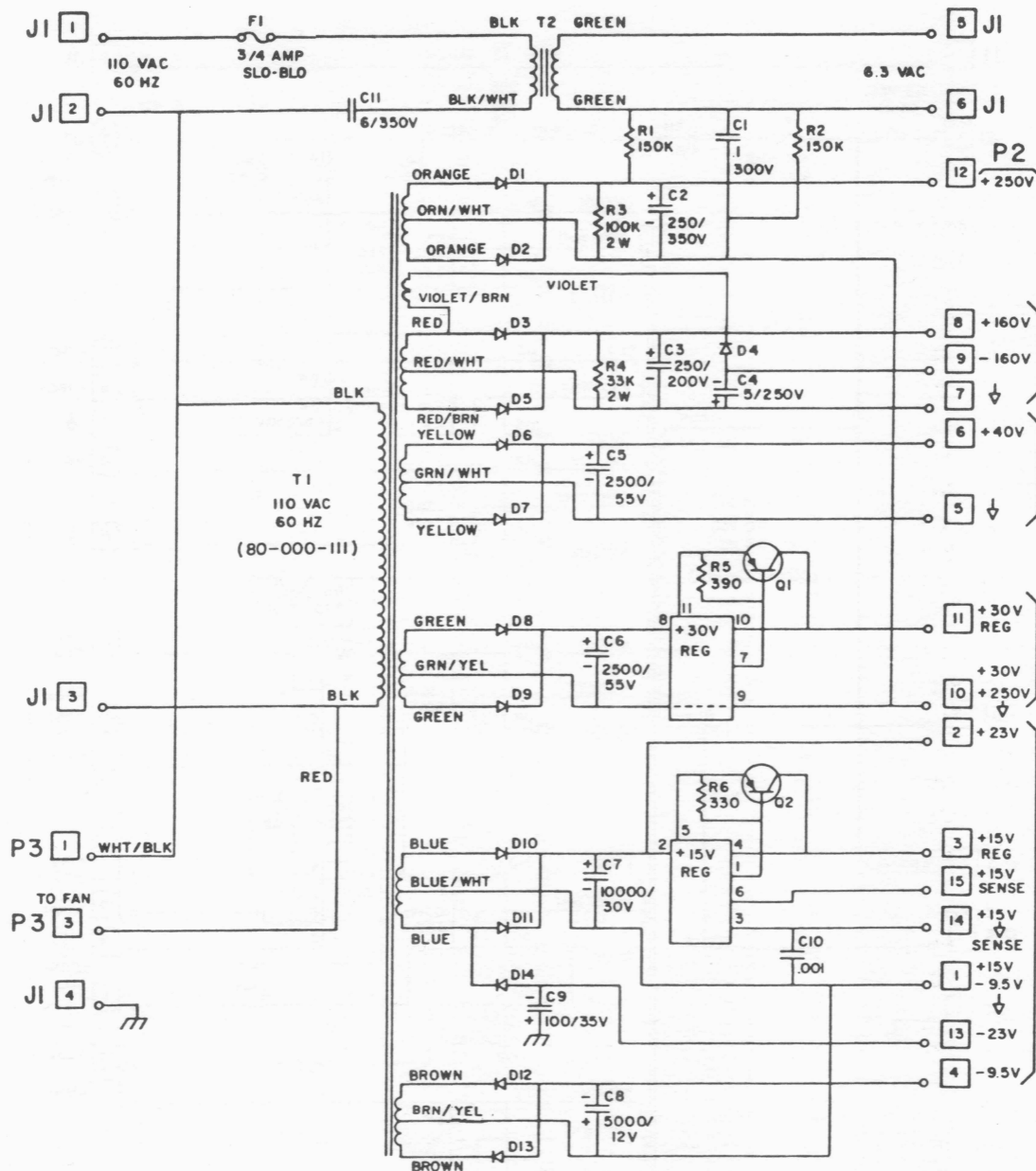
No.	Advent Part No.	Description
R2	50-714-062	250K, 30% Linear
R1	50-714-067	5K, 30% Linear
R3, R4	50-714-078	10K, 30% Linear
R5	50-714-089	20K, 10% Inverse Semi-Log



POWER SUPPLY CHASSIS ASSY. NUMBERING SERIES A2900 (RA2901, ETC.)
ALL RESISTORS 1/4 WATT-10% UNLESS OTHERWISE NOTED.
ALL CAPACITORS IN MFD. UNLESS OTHERWISE NOTED.

10-990-354 POWER SUPPLY CHASSIS ASSEMBLY A2900

No.	Advent Part No.	Description	No.	Advent Part No.	Description
C1	60-633-029	.1, 300V, 10%	D1, 2	60-663-027	1N4006
C2	60-613-067	250 μ f, 350V	D3-5	60-663-017	1N4004
C3	60-613-050	250 μ f, 200V	D6, 7	60-663-028	1N4003
C4	60-613-058	5 μ f, 250V	D8, 9	60-663-047	MR502
C5, 6	60-613-064	2500 μ f, 55V	D12	60-663-010	1N4002
C7	60-613-063	10,000 μ f, 35V	13, 14		
C8	60-613-066	5000 μ f, 12V	D10, 11	60-663-026	1N5400
T1	80-000-056	Power Transformer	Q1	60-673-020	TIP42A
T2	80-000-060	Filament Transformer	Q2	60-673-033	MJE2955
C11	60-632-252	6 μ f, 350V, Paper-Oil		10-990-182	Thermostat Assembly
				20-312-002	TO-66 Socket, Modified



POWER SUPPLY CHASSIS ASSY. NUMBERING SERIES A2900 (RA2901, ETC.)
 ALL RESISTORS 1/4 WATT-10% UNLESS OTHERWISE NOTED.
 ALL CAPACITORS IN MFD. UNLESS OTHERWISE NOTED.

10-990-354 POWER SUPPLY CHASSIS ASSEMBLY A2900

REMOTE CONTROL BOARD – 3000

The Remote Control Board provides both a DC contrast control for the R, B, and G video signals and also a DC volume control.

Transistors Q1, Q2, Q3, and Q4 form a DC-operated contrast control which senses the DC voltage on pin 7 (between +30V and 0V) to control the variable gain amplifier. Transistor Q4 turns the video voltage signal into a current signal which exits from Q4's collector and is split between Q2 and Q3. The output is taken from the collector of Q2 across R9. R9 will have more or less signal across it depending upon how current from Q4 is divided between Q2 and Q3. In the case of full gain, Q2 takes all the current from Q4 and all of the signal ends up across R9. If however, the contrast control is turned down, the video signal goes through Q3 and is by-passed to ground through C9 and R12. The variable amounts of current taken by Q2 and Q3 are determined by the differential voltage between Q2 and Q3's bases. Q3's base voltage is set at +15 volts by R13 and R14. Q1 acting against R7 and R10 determines the voltage on Q2's base.

The voltage between +30 and 0 volts at pin 7 is divided by R1, R6 and R3 to produce a voltage on the base of Q1 between +30 and +23V. This voltage on the base turns Q1 on until the emitter voltage is equal to the base voltage plus 0.6 volts. As Q1 turns on, its collector drives current into C3, increasing the base voltage on Q2 and allowing Q2 to draw more current from Q4 until the voltage across R8 equals the voltage at the base of Q1 plus 0.6 volts. The DC voltage across R8 is a fraction of the contrast voltage on pin 7 and can go no higher than 6 volts. The video signal is developed across R9 and is equal to the input signal voltage times a number between 0 and 1.

The video is then coupled through C12 (which removes part of the low frequency bounce caused by operation of the contrast control) into Q5, a single stage 1.3X amplifier. The output of Q5 is then buffered to the output pin by Q6.

In the audio section Q19 provides a treble-shelf tone control action (see the tone control-600 circuit description). The audio signal is then coupled by C47 to divider R75-R76 and into pin 3 of IC 1, which functions as a two-quadrant multiplier. In the IC the audio signal modulates current source Q9, whose collector current is split between Q4 and Q5 in a ratio determined by the control voltage at pin 2. The output from Q5 appears across R15 and is buffered to pin 5. Differential pair Q6-Q7 acts to maintain a constant DC voltage at the output.

Finally, relay K1 located on the circuit board provides normal-external switching for both video and audio signals.

POWER CONTROL BRACKET – A3000

The power control bracket assembly provides a DC remote control capability for switching both the power transformer and also the filament transformer. The necessary switching is accomplished by relay K1, driven by Q1. Power for Q1 is supplied by the half-wave rectified output of T1, which is always connected across the line. This voltage, approximately 48V when the receiver is off and 24V when it is on, is divided and applied to Q1's base by the remote on/off switch connected across J/P 23-1 and J/P 23-3.

One pole of the relay connects the primary of the power transformer to the line through TR 1. This thermistor (nominally 10 Ω when cold) limits the surge current through the relay contacts. The other pole of the relay connects R1 across the constant-voltage filament transformer secondary when the set is off. This increase in load drives the filament transformer into its constant current region, and as a result the filament voltage is halved.

